

**Summary of Eleven Indirect-Cost Audits  
and NSF's Process for Reviewing  
Indirect-Cost Proposals**

**National Science Foundation  
Office of Inspector General**

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## EXECUTIVE SUMMARY

The National Science Foundation (NSF) negotiates indirect cost rates for about 90 organizations on behalf of the Federal government. From 2000-2004 these organizations received \$3.8 billion in Federal funding, of which \$760 million (20 percent) was for indirect costs. To assess the risk of excessive indirect cost payments charged to the Federal government by these organizations, we audited indirect cost proposals submitted to NSF for the years 1997-2002 by 11 of these organizations. These entities received approximately \$201 million of Federal funds from 2000-2004, of which about \$84 million or 42 percent was funded by NSF.

We found four common problems in these proposals: overstated indirect cost pools, understated direct cost bases, inadequate supporting documentation, and untimely or no submission of indirect cost proposals. We also found that there were four common causes of these findings: lack of understanding of the Federal requirements for calculating indirect cost rates, missing or inadequate policies and procedures to prepare indirect cost proposals, accounting system deficiencies, and time-and-effort reporting deficiencies.

To determine if improvements in NSF processes could help detect and prevent the common findings and their causes in future rate negotiations, we compared NSF's proposal review processes to guidance in OMB Circulars, other agencies' proposal review procedures, and NSF's existing guidance. We found that NSF did not obtain current information about awardees' financial management systems at the time of each proposal review, or consistently maintain information on prior rate negotiations in its indirect-cost files. We also found that NSF had not developed guidance for its reviewers to use in evaluating submitted proposals, or adopted other agencies' existing guidance, and that it needed to fully implement a proposal tracking system to track the due dates and actual receipt of proposals and to follow up on untimely submissions.

Accordingly, we recommended that the Director of the Division of Institution and Award Support develop a risk-based program to review indirect cost proposals. At a minimum the program would include updated assessments of awardees' financial management systems, historical files on prior rate negotiations with each awardee, guidance for reviewers to use in processing submitted proposals, and effective tracking of proposal receipt and follow up if proposal submissions are late. In response to our recommendations, NSF agreed to continue improving its program for the negotiation of indirect cost rates.<sup>1</sup> However, NSF did not comment on the inclusion of an updated assessment of awardees' financial management systems as part of its risk-based program for proposal review. Because the audits showed that many of the common findings were caused by the inadequacy of awardees' financial management systems, we believe that an understanding of awardees' current financial management systems is an essential part of

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<sup>1</sup>We have summarized NSF's response and provided our comments after each recommendation in the body of the report. We have also included NSF's response to our draft report in its entirety as Attachment 1. Because NSF's response suggests some misunderstanding regarding our draft report, we have provided additional responses to the NSF reply in Attachment 2.

risk analysis at the proposal-review stage. In addition, although NSF has implemented some of the elements in the recommendation, it is important that it incorporate each of these elements into written policies and procedures for staff use.

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## ACRONYMS

ANS	Academy of Natural Sciences
AAPT	American Association of Physics Teachers
ACS	American Chemical Society
AGU	American Geophysical Union
AMS	American Meteorological Society
BLOS	Bigelow Laboratory for Ocean Sciences
BM	Bishop Museum
CAARB	NSF's Cost Analysis and Audit Resolution Branch
CIW	Carnegie Institution of Washington
DGA	NSF's Division of Grants and Agreements
DIAS	NSF's Division of Institution and Award Support
DOL	U. S. Department of Labor
EBC	Educational Broadcasting Corporation
HHS	U. S. Department of Health and Human Services
MAA	Mathematical Association of America
MBG	Missouri Botanical Garden
NSF	National Science Foundation
OIG	NSF's Office of the Inspector General
OMB	U. S. Office of Management and Budget
PAR	Personnel Activity Report
PNAG	NSF's Prospective New Awardee's Guide
SOG	NSF's Standard Operating Guidance

# INTRODUCTION

## Background

Federal grant regulations allow grantees to charge both direct and indirect costs to Federal awards. Indirect expenses include activities and supplies that have been incurred for common or joint objectives. Unlike direct costs, indirect costs are not easily traceable to a particular award and they generally appear on award budgets as a percent of direct costs. To determine the percent, award recipients negotiate indirect rates with their cognizant agencies, the Federal agencies that normally provide the awardees with the largest amount of Federal funding. The National Science Foundation (NSF) is the cognizant agency for about 90 non-profit organizations.

In the negotiation process, an awardee first submits an indirect cost rate proposal to its cognizant agency. The U.S. Office of Management and Budget (OMB) provides guidance to awardees on the timing and content of these proposals. Specifically, OMB Circular A-122, *Cost Principles for Non-Profit Organizations*, states that awardees must submit indirect cost proposals annually to their Federal cognizant agencies. The Circular explains several methodologies for calculating indirect cost rates. In general, awardees calculate their indirect cost rates by dividing their indirect cost pools by their direct cost pools.

After an awardee submits an indirect cost proposal to its cognizant agency, the agency determines whether the proposal complies with the OMB guidance and fairly allocates indirect costs to all the organization's activities or projects. The cognizant agency will also determine whether a more extensive review of the proposal is required, such as a site visit. In the final step, the agency and the awardee negotiate an indirect cost rate to be used by all Federal agencies on all Federal awards made to that awardee. If the awardee has a prior history with the agency and has submitted reliable proposal submissions in the past, the agency may agree to a predetermined rate, which is not subject to future adjustment. However, if the agency has little experience with an awardee, or otherwise considers it risky, it may negotiate a provisional rate. This rate must be finalized, which means that after the end of the year, the cognizant agency must determine the awardee's actual rate for the year. After the actual rate is finalized, the awardee will then adjust its charges for indirect costs on Federal awards based on the actual rate.<sup>2</sup>

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<sup>2</sup> NSF typically uses a maximum provisional rate, which in effect limits the awardee to a recovery of indirect costs at the lower of the provisional rate established at the beginning of the year or actual rate established at the end the year.

## **Indirect Cost Negotiation at NSF**

At NSF the Cost Analysis and Audit Resolution Branch (CAARB)<sup>3</sup> is responsible for negotiating indirect cost rates for the organizations for which NSF has indirect cost rate cognizance. CAARB, which has 14 employees, performs multiple responsibilities. In addition to negotiating indirect cost rates, CAARB is responsible for resolution of audit reports and preaward and postaward monitoring of activities. The CAARB staff perform all of these functions, but there is a designated team leader for indirect cost rate negotiations.

For guidance in reviewing indirect cost proposals, CAARB sometimes refers to external publications from other agencies, such as the *Review Guide for Non-Profit Organization's Indirect Cost Proposals*, developed by the Department of Health and Human Services (HHS). This guide is specifically written for proposal reviewers. CAARB also refers occasionally to the *Indirect Cost Rate Determination Guide*, prepared by the Department of Labor (DOL). This guide is not directed to proposal reviewers but rather to awardees that submit proposals. It explains how to prepare an indirect cost proposal and provides examples of the application of two methodologies and answers to frequently-asked questions. NSF also has two guides that contain questionnaires that reviewers can use in assessing the financial management systems of awardees for which NSF has assumed responsibility for negotiating indirect cost rates. These guides are *Standard Operating Guidance 1990-06 (SOG 1990-06)* and *Prospective New Awardee Guide (PNAG)*.

## **The Importance of Accurate Indirect Cost Rate Negotiations at NSF**

From 2000 to 2004, the organizations for which NSF has indirect cost rate cognizance expended a total of a \$3.8 billion in Federal funds of which \$2.3 billion, or 61 percent, was funded by NSF. Of the \$3.8 billion about \$760 million, or about 20 percent, was for indirect costs. Because of the large amount of funds involved, the negotiation of accurate rates is important. To assess the risk that NSF may be overpaying indirect costs on NSF awards, the NSF Office of the Inspector General (OIG) decided to audit proposals from 11 awardees for which NSF negotiates indirect cost rates.<sup>4</sup> The audits were selected on the basis on an independent OIG risk assessment as well as CAARB referrals of proposals it concluded had serious deficiencies. The 11 audited organizations claimed approximately \$201 million of Federal funds from 2000-2004, of which about \$84 million, or 42 percent was funded by NSF.

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<sup>3</sup> CAARB is part of the Division of Institution and Award Support, which is under the Office of Budget, Finance, and Award Management.

<sup>4</sup> The organizations audited were: The Academy of Natural Sciences (ANS), the American Association of Physics Teachers (AAPT), the American Chemical Society (ACS), the American Geophysical Union (AGU), the American Meteorological Society (AMS), the Bigelow Laboratory for Ocean Sciences (BLOS), the Bishop Museum, the Carnegie Institution of Washington (CIW), the Educational Broadcasting Corporation (EBC), the Mathematical Association of America (MAA), and the Missouri Botanical Garden (MBG).



## OBJECTIVES, SCOPE, AND METHODOLOGY

The objectives of this report are a) to summarize the results of 11 audits that addressed weaknesses in awardees' processes for preparing accurate and complete indirect cost proposals, and b) to identify improvements in NSF's procedures for reviewing and approving awardees' indirect cost rates. To address the first objective, we reviewed 11 audit reports, covering 19 indirect cost proposals submitted to NSF for the years 1997-2002 (See Appendix A). To address the second objective, we researched OMB Circulars, NSF's procedures, and guidance from four other agencies,<sup>5</sup> to identify ways in which NSF can enhance its current practices to help prevent the problems found in our audits. (See Appendix B.) We then reviewed 41 proposals in CAARB's files from 1995 to 2002<sup>6</sup> from the audited institutions to understand NSF's proposal review process. We compared CAARB's review and approval processes with those used by other Federal agencies. (See Appendix C.)

Because NSF did not always keep information about awardees' financial management systems and historical rate negotiations in its files, we could only measure NSF's processes designed for the review of specific proposals. These processes included the assessment of the completeness of the proposal; reconciliation of total costs in the proposal to total costs on the financial statements; analysis of adjustments and reclassifications; and determination if the direct cost base equitably distributes indirect costs, proposed costs are allowable and consistently treated, and the proposal requires extensive review or a site visit. To assess the timeliness of proposal receipt, we compared the actual receipt dates for 75 possible proposals NSF should have received between 1995-2002<sup>7</sup> from the audited institutions with the required due date, which is six months after the end of an awardee's fiscal year.

We conducted the audit for this summary report in accordance with the Comptroller General's *Government Auditing Standards* (2003) and included such procedures that we considered necessary to address the audit objectives.

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<sup>5</sup> The four other agencies are: the Department of Health and Human Services (HHS), the Office of Naval Research (ONR), the Department of Labor (DOL), and the Department of Energy (DOE).

<sup>6</sup> At the time of our review, there was only one proposal for FY 2003 in the CAARB files, and we included this proposal to increase the sample size. Otherwise, the sample covers the period from 1995-2002 (eight years). Also, we included two years of proposals prior to 1997, the earliest year audited, so we could better understand the processes used for proposals immediately prior to those in which auditors found inflated indirect cost rates.

<sup>7</sup> There were fewer than 88 possible proposals (11 awardees \* 8 years) because we used the first available proposal in the CAARB files as the starting point for each awardee.

## **AUDIT REPORTS OF INDIRECT COST PROPOSALS IDENTIFY COMMON WEAKNESSES**

The 11 audits of indirect cost rate proposals covered by this review identified four major categories of common findings: overstated indirect cost pools, understated direct cost bases, unsupported indirect costs, and untimely indirect cost submissions. Awardees overstated their indirect cost pools by \$9 million, understated \$7.2 million of costs in their direct cost bases, and did not provide supporting documentation for \$676,603 of claimed costs.<sup>8</sup> Further, five proposals were never submitted, and five were late, including one that was three years late. Without reliable and timely indirect cost proposals, there is a risk that NSF will reimburse excessive indirect costs.

### **Overstated Indirect Cost Pools (\$9 million)**

Ten of the audits found that contrary to Federal requirements, awardees included unallowable and excessive costs in their indirect cost pools, misclassified direct costs as indirect costs, and did not offset indirect cost pools with applicable credits. For example:

- Ten awardees included \$1.2 million of unallowable costs in their indirect cost pools, including \$234,860 of property losses, \$148,497 of bad debt expense, \$134,886 of depreciation of government-funded assets, and \$108,617 of investment expense.
- Six awardees misclassified \$6.2 million of direct costs, such as mission-related activities, as indirect costs.
- Four awardees did not offset \$1.3 million of applicable credits; for example, they did not reduce the rental expense included in the indirect cost pools, which was related to income received from the rental.
- Seven awardees included \$350,000 of excessive costs, such as double-recorded expenses, in their pools.

### **Understated Direct Cost Bases (\$7.2 million)**

To fairly allocate indirect costs, Federal cost principles provide guidance for the inclusion of costs in the direct cost bases. In addition, the cost principles provide guidance for the inclusion and valuation of donated labor costs in the bases. However, we found that five awardees did not include all the costs that should have been in the direct cost bases, and two did not have reliable methods for valuing volunteer services costs included in their bases.

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<sup>8</sup> These numbers represent inaccuracies in the indirect cost proposals used to negotiate rates on behalf of the Federal government; the numbers do not represent questioned costs applicable to NSF awards. Even if a portion of any amount was applicable to NSF awards, the inaccuracies did not always result in questioned costs if the awardee had a predetermined rate that was not subject to subsequent downward revision.

*Erroneous Exclusion of Costs from the Direct Cost Bases (\$7.2 million)*

Applicable cost principles state that costs of activities, including those that are not allowable as charges to Federal awards, should be included in the direct cost base if they represent activities that utilize an organization's personnel, occupy its space, and otherwise benefit from the organization's indirect costs. However, five awardees erroneously excluded a total of \$7.2 million of costs that met these criteria and therefore, should have been included in their direct cost bases so that they could be allocated their fair share of indirect costs. For example:

- One awardee excluded unallowable food and catering costs from its direct cost bases because it did not understand that these unallowable costs should be included in the bases.
- Another awardee excluded stipends paid to post docs and fellows from its direct cost bases because it considered the stipends to be a part of participant support costs, even though the auditors found that the post docs and fellows were de facto employees and their stipends should be included in the direct cost bases with other direct labor costs and assigned the portion of indirect costs used to support them.
- The awardee that excluded stipends from its direct cost bases also improperly excluded from its direct cost bases small equipment purchases that did not meet its capitalization threshold because it expected to use the equipment for several years.

*Inadequate Support for the Valuation of Volunteer Service Costs (\$62,476)*

Rates of reimbursement for volunteer labor should be consistent with the rates paid for similar work in other activities of the organization. However, one awardee included volunteer service costs in its direct cost bases without documenting the type of services performed by the volunteers or the rate of pay for those services. In addition, the hourly rate assigned to each volunteer was not consistent with the rate of pay assigned to an employee with similar functions. Similarly, another awardee did not support its valuation of voluntary service costs with actual salaries or wages paid to regular employees for comparable work. The lack of support for valuing this component of the direct cost base reduces the accuracy of proposed indirect cost rates.

### **Inadequate Documentation (\$676,603)**

Although Federal administrative requirements state that awardees' financial management systems shall provide accounting records supported by source documentation, we found that six awardees could not support \$676,603 of costs included in their indirect cost pools. For example:

- One awardee could not provide invoices for over three years of credit card charges.
- A second awardee was not able to provide adequate supporting documentation for senior management travel expenses.
- A third awardee could not provide invoices for credit card charges for travel, books and magazines, and personnel costs, or support charges such as payments to vendors.
- Another awardee was not able to provide adequate support for claimed costs because it provided only insufficient documentation such as check requests or credit card statements with no corresponding receipts.

These unsupported costs did not materially reduce proposed indirect cost rates; however, they resulted from internal control weaknesses, which if not corrected, could result in inflated rates in future proposals.

### **Annual Indirect Cost Proposals Not Timely Submitted to NSF**

Although the cost principles require that organizations with previously established indirect cost rates must submit a new indirect cost proposal to the cognizant agency within six months after the end of each fiscal year, three awardees did not submit the required annual proposals. Specifically, these awardees never submitted five proposals and submitted five late, including one that was submitted three years after its due date:

- One awardee submitted only one proposal from FY 1996-FY 1999, and the submitted proposal was nearly a year late. Until the audit, NSF had not reviewed this awardee's indirect cost proposal for five years.
- A second awardee did not submit annual indirect cost proposals for four years (FY 1997-FY 2000), because it believed the inclusion of schedules of the calculation of its indirect cost rates in its Single Audit reports was sufficient, and NSF did not notify the awardee that it was not in compliance with Federal requirements for submission of annual indirect cost rate proposals until 2001.
- A third awardee submitted its indirect cost proposals to NSF on a biannual rather than an annual basis for FY 1995, 1997, and 1999, although it did submit an FY

2000 proposal after NSF specifically requested it. The awardee stated that it submitted biannual indirect cost proposals because NSF had orally approved this practice.

As a result of findings identified in these 11 audit reports, the Federal government significantly overpaid indirect costs. The average difference between the proposed and audited rates was about seven percentage points, although in one case the difference was as much as 46 percentage points. We estimated that over five years the use of the lower audited rates would result in \$5 million of cost savings to the Federal government, including \$2 million to NSF. Further, because awardees' proposals were missing or late, NSF was not aware of the most current rates it should apply to new awards. Thus, the Federal overpayment of indirect costs was probably considerably larger than the cost-savings numbers indicate. For example, based on the difference between the predetermined rate and the average audited rate, we estimate that NSF paid about \$.5 million of excess indirect costs to one awardee during 1996 and 1997 because it did not receive annual proposals in those years and thus could not detect that the awardee's proposed rates were higher than its actual allowable rates.

## **AWARDEE PROPOSAL DEFICIENCIES SUGGEST NEED FOR EXPANDED NSF PROPOSAL REVIEW**

### **Common Internal Control Weaknesses**

Awardees overstated their indirect cost pools, erroneously calculated direct cost bases, lacked adequate documentation to support costs included in their indirect cost pools, and did not submit timely annual proposals because of four common internal control weaknesses. Awardees a) did not understand Federal requirements for the preparation of indirect cost proposals, including the requirement to submit annual proposals to NSF within six months of the end of the fiscal year, b) did not have any or adequate policies and procedures to prepare indirect cost proposals, c) lacked accounting systems to accurately track and report the allowable direct and indirect costs included in their proposal submissions, and d) did not have adequate time and effort systems to allocate salary and wage expenses to indirect and direct activities including NSF awards.<sup>9</sup>

The prevalence of these weaknesses suggests that NSF needs to strengthen its review of awardees' indirect cost rate proposals to ensure timely and reliable submissions as a basis to negotiate awardee indirect cost rates. In particular, NSF needs to evaluate awardees' processes and procedures regarding the methodologies for treatment of costs used to prepare indirect cost proposals and assess the risk that proposals may not be reliable as a basis to negotiate indirect cost rates, or that they may not be timely submitted. Such a risk-based approach should help detect and prevent findings such as those commonly reported in the 11 audits.

### Inadequate Understanding of Federal Requirements

Seven awardees proposed inaccurate indirect cost rates because their staffs did not understand Federal requirements. For example, one awardee did not understand when to offset applicable credits or exclude unallowable costs included in the indirect cost pools. It also did not know that stipends paid to de facto employees should be included in the direct cost bases. In addition, it did not understand how to classify direct costs, which it erroneously classified as indirect costs; treat non-capital equipment costs, or record costs in the correct fiscal year. Further, another awardee erroneously included direct costs (marketing, award expenses, dues, and membership recruitment expenses) in its indirect cost pools instead of its direct cost bases because its staff was not familiar with applicable cost principles. Similarly, a third awardee included unallowable costs in its indirect cost pool because it did not understand Federal requirements on allowable costs.

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<sup>9</sup> Appendix E identifies the weaknesses associated with each organization.

In addition, many of these institutions experienced high staff turnover, lacked staff specialization in the preparation of indirect cost proposals, and provided little or no training, resulting in employees not having the necessary knowledge or skills to prepare indirect cost proposals. This limited training was evidenced in the employees' general lack of understanding of applicable cost principles for indirect cost proposals.

#### Missing or Inadequate Procedures to Prepare Indirect Cost Rate Proposals

Federal administrative principles state that awardees must have written procedures to determine the reasonableness, allocability, and allowability of costs in accordance with applicable cost principles. However, five of the ten awardees audited did not have written policies and procedures explaining how to prepare indirect cost proposals; and one did not have written policies and procedures to segregate assets purchased by government funds from other assets or to identify unallowable expenses. The lack of any or adequate policies and procedures was the single most common internal control weakness, appearing in 22 separate findings. Also, nonexistent or inadequate policies and procedures for the preparation of proposals exacerbated the staffing limitations, because employees did not have institutional procedures on indirect cost proposal methodology to guide them in preparing submissions to NSF.

#### Accounting System Deficiencies

Although awardees' accounting systems must document allowable costs, six did not have adequate manual or automated accounting systems. For example, one awardee did not track salary and wage costs by Federal award, a deficiency that made it difficult to ensure that costs charged to NSF benefited NSF or that costs in the pools and bases were accurate. In addition, another awardee, which had about 50 cost centers, did not have an accounting system that separated direct and indirect costs and only broke out these costs when it prepared its indirect cost proposals. Such a system was inefficient and error-prone. Further, two awardees did not have adequate methods to identify and segregate unallowable costs. In one case, the accounting system did not identify and segregate allowable and unallowable expenses, resulting in the erroneous inclusion of unallowable costs, including alcohol and an awards dinner, in its indirect cost pool.

#### Deficiencies in Time and Effort Reporting

Non profit awardees must maintain personnel activity reports (PARs) for employees whose compensation is charged directly to Federal awards and to support the allocation of costs for employees who charge time to both direct and indirect costs. In addition, PARs must reflect an *after the fact* determination of the actual (not budgeted) activity of each employee, account for employees' total compensated activity, and be signed by the

employee or the employee's supervisor. Because personnel costs represent the largest category of expenses charged to the government as both direct and indirect costs,<sup>10</sup> it is important that awardees have reliable controls over them.

However, six awardees did not have adequate systems to report time and effort expenses. For example, two awardees had no systems to track the labor of staff who spent time on both direct and indirect activities. As such, one of these awardees allocated approximately 40 percent of its research department costs to the indirect cost pool based on management review of budgeted costs, as opposed to actual costs supported by PARs. The other awardee arbitrarily allocated labor costs, constituting 10 percent of its proposed indirect cost pools, to the indirect pools, or without supporting PARs. Also, a third awardee could not support allocated indirect salary and wage costs that comprised seven percent of its proposed indirect cost pool. Without adequate time and effort reporting systems, these three awardees could not support about \$5 million of salary and wages included in their indirect cost pools.

### **NSF Needs to Continue Strengthening Its Program For Reviewing Indirect Cost Proposals**

The prevalence of common internal control weaknesses indicates that NSF needs to continue strengthening its processes for indirect cost proposal reviews. In particular, NSF needs to implement a comprehensive risk-based program to help detect and prevent the types of common findings in these audit reports. At a minimum such a review program should provide for:

- An assessment of awardees' current financial management capabilities, to determine the reliability of the financial systems used to prepare indirect cost proposals;
- Maintenance of updated documentation of awardees' prior rate reviews, to facilitate trend analysis;
- Written guidance to ensure quality and consistency in NSF's review process; and
- A system to effectively track the receipt of proposals to ensure that they are timely.

The continued development and implementation of a coherent documented program for the review of indirect cost proposals could detect and prevent some of the findings in our audits and thus reduce the risk that negotiated indirect cost rates result in excessive indirect cost charges to the Federal government.

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<sup>10</sup> Labor costs comprise about a third of NSF award costs.



## NSF Needs to Obtain Current Information About Awardees' Financial Management Systems

NSF has two guides, *Standard Operating Guidance 1990-06 (SOG 1990-06)*, and *Prospective New Awardee Guide (PNAG)*, which include questionnaires to assess new awardees' financial management systems. These systems are instrumental in accounting for the costs used to prepare indirect cost proposals. However, NSF did not routinely update the information in the questionnaires or require their use during indirect cost proposal reviews. Updated answers to the questions in *SOG 1990-06* and *PNAG* could have revealed some of the control problems at the 11 awardees audited, possibly resulting in corrective action prior to the audits. For example, both *SOG 1990-06* and *PNAG* ask whether the awardee maintains timekeeping records for each employee to account for 100 percent of his or her total effort. In addition, *PNAG* requires the awardee to attach a sample timesheet and provide its procedures for completing timesheets and allocating salary and wages to Federal awards. If NSF had obtained and reviewed this information during its proposal reviews of two awardees, it could have identified before our audits that these awardees did not have systems to track direct and indirect labor costs and were likely to significantly overstate their indirect cost rates.

In addition, *SOG 1990-06* asks whether the awardee is familiar with all procedures in the applicable cost principles regarding the allowability of costs on Federal awards. Information elicited by this question would help identify gaps in awardees' knowledge of Federal requirements, the second most common cause of findings in the audit reports. If NSF had known that awardees' staffs did not have the requisite training and experience with Federal requirements, it could have increased its scrutiny of their proposals. NSF also could have used this information in the years preceding the audits to encourage awardees to better train their staffs in Federal cost principles and to provide them with effective written guidance for preparing proposal submissions. Earlier detection that the policies and procedures were inadequate and subsequent corrective action might have prevented some of the audit findings.

## NSF Needs to Fully Implement its Risk Assessment Processes

In November 2004 CAARB adopted rules for file maintenance, which require that as new indirect cost rates are negotiated, information about prior rate negotiations will be maintained and updated on a separate section of a file. Specifically, the CAARB files will include previously signed rate agreements, prior calculations showing indirect cost pools and direct cost bases in detail, the documentation of agreed upon methodologies for the treatment of costs, and the last three years of rate-calculation documents in their entirety. If CAARB fully implements these new procedures, NSF will have a stronger framework for

assessing proposal risk, because the information required by the new procedures will facilitate analytical procedures such as a trend analysis of prior pools, bases, and rates and reveal significant changes that might indicate new risks of incomplete or inaccurate rate calculations.

### NSF Needs Reviewer Guide

A proposal review guide establishes office-wide standards for proposal reviews and helps ensure that reviews are complete and consistent. However, NSF has not developed its own reviewer guide or adopted another agency's guide for the analysis of submitted proposals. Some of the processes, or steps, that would be useful to include in a reviewer guide would be: Assessment of the completeness of the proposal; reconciliation of total costs in the proposal to costs on the financial statement; and analysis of any adjustments for unallowable costs. Other useful steps would include determining if the proposed base will equitably distribute indirect costs, whether costs are allowable and consistently treated as direct or indirect, and whether there are factors that would affect the establishment of a provisional rate. In addition, a guide would require justification for level of review, such as a desk review or site visit, that each proposal should receive.

Many of these steps and processes are listed in guides developed at other agencies. The guide most applicable to NSF is the *Review Guide for Non Profit Organization's Indirect Cost Proposals* published by the U.S. Department of Health and Human Services (HHS).<sup>11</sup> While CAARB staff often refer to this guide, NSF has no policy requiring its use. Also, the *Cost Negotiator's Handbook*, an internal unpublished document prepared by the U.S. Department of Labor (DOL),<sup>12</sup> includes two checklists, "Supporting Documentation" and "Negotiator's Review Procedures," which are applicable to NSF's rate review activities.

However, NSF's proposal review procedures varied from those contained in the HHS and DOL review guides. (See Appendix C). For all of the 41 proposals reviewed, NSF obtained audited financial statements for the applicable year; and in most reviews, documented whether the proposal needed an extensive review or a site visit and determined whether or not total costs in the proposal reconciled with total costs on the financial statements. However, there was little evidence that NSF knew if the data in the direct cost bases was current and accurate; or if the proposed indirect cost pools benefited Federal awards. If reviewers had determined whether the data in the direct cost bases was accurate, they would have discovered that one awardee had no policy for documenting the value of

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<sup>11</sup> This guide is available on the internet at <http://rates.psc.gov/fms/dca/negrev4.pdf>. Accessed May 10, 2006.

<sup>12</sup> In December 2004, the Chief of the Division of Cost Determination at the Department of Labor sent us electronic copies of documents included in this 1999 handbook. We provided copies of these documents to CAARB staff during our review.

volunteer service costs included in the base; and thus the accuracy of the bases in prior years as well as in the audited year, could not be determined. Similarly, if reviewers had determined whether the proposed costs benefited Federal awards, they would have found that this awardee included depreciation of government-funded assets in its indirect cost pools, thus overstating its proposed rates.

### NSF Needs to Fully Implement its Proposal-Tracking Systems

NSF needs to track the due dates and actual receipt of proposals to ensure they are submitted within the required six-month period after the end of an awardee's fiscal year and to follow up if they are late. Specifically, we found that of 75 possible proposals<sup>13</sup> there was no evidence that 17 proposals or 23 percent were ever submitted to NSF. Further, 29 proposals or 39 percent were submitted late. On average, the proposals were submitted eight months late, although the range was from .5 months to 36 months. This shows that the finding about missing proposals or untimely submissions was even more common than the audits indicated, since the findings in the reports were limited only to the audited years.

In 2004 CAARB created a spreadsheet to track the receipt of proposals. In addition to proposal receipt dates, the system also tracks other information, such as the status of review process within CAARB. While we did not review this tracking system as part of our audit, it appears that it will address the concerns about proposal timeliness as long as the spreadsheet is regularly updated and NSF follows up on late proposals. However, to track proposal receipt NSF may also want to consider using a more reliable automated system to provide notification of pending or late proposals.

## **RECOMMENDATIONS**

We recommend that the Director of the Division of Institution and Award Support develop a risk-based program to review indirect cost rate submissions that at a minimum includes:

- Updated assessment of awardees' financial management systems,
- Historical files on prior rate negotiations with each awardee,
- Guidance to reviewers on proposal review processes and steps, and
- Effective tracking of the receipt of proposal submissions and follow up if they are late.

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<sup>13</sup> There were only 75 possible proposals because not all the files contained proposals for all 8 years (from 1995-2002).

## **NSF's Response**<sup>14</sup>

NSF generally agreed with the recommendation and stated that it has implemented or is in the process of developing or implementing the required elements, including historical files on prior rate negotiations with each awardee; guidance to reviewers on proposal review processes and steps; and effective tracking of the receipt of proposal submissions. However, the response did not specifically address the implementation of the first element, updating the assessment of awardees' financial management systems. In addition, the response did not address the second part of the fourth element, how the proposal tracking system will follow up on untimely submissions.

## **OIGs Reply**<sup>15</sup>

We acknowledge that NSF has been implementing its file maintenance procedures on a case by case basis as it processes new proposals and is tracking proposal receipt on its multi-purpose manual spreadsheet, and plans to develop steps to guide its staff in reviewing proposals. However, NSF also needs to address the first element of the recommendation: an assessment of awardees' current financial management systems. Many of the findings in the audits resulted from awardees' inadequate accounting and time and effort reporting systems on which their indirect cost proposals submission are based. Thus, NSF's understanding of the systems used to prepare indirect cost proposals is a *critical* part of the risk assessment process because it helps determine the risk that submitted proposals may not be accurate.

In addition, the response did not explain how the proposal-receipt tracking system would ensure follow up if proposals are late. Although NSF has developed a spreadsheet to manually track receipt of indirect cost proposals, NSF needs to develop a written process that helps ensure receipt of proposals in a timely manner. This process should include assigning responsibility for identifying late proposals on the manual tracking system and following up with the awardee when a proposal is untimely. We continue to believe that the best method to track and follow up on late proposals would be an automated tickler system but would accept a manual process supported by written procedures that assigns the responsibility to follow up on late proposals.

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<sup>14</sup> NSF's verbatim response appears in Attachment 1.

<sup>15</sup> OIG's reply to the responses not addressed in this section appears in Attachment 2.

In summary, NSF needs to incorporate, at a minimum, *all* of the elements of the recommendation into a set of written policies and procedures for a comprehensive proposal-review program.

## APPENDIX A

### OIG AUDITS

<b>Institution</b>	<b>Report No.</b>	<b>Years Audited</b>
American Meteorological Society	02-1016	1998-2000
Mathematical Association of America	03-1001	2000
Bigelow Laboratory for Ocean Sciences	03-1003	2000
American Association of Physics Teachers	03-1004	1997-2000
Academy of Natural Sciences	03-1006	2000
Carnegie Institution of Washington	03-1007	2000
Bishop Museum	03-1010	2000
Missouri Botanical Garden	03-1011	1999-2000
Educational Broadcasting Corporation	04-1001	2000-2001
American Chemical Society	04-1009	2000-2001
American Geophysical Society	05-1011	2002

## APPENDIX B

### COMPILATION OF POSSIBLE STEPS TO REVIEW TIMELINESS AND QUALITY OF INDIRECT COST PROPOSALS

	<b>Associated with Audit Finding</b> (The number following X represents the frequency of the finding)
<b>I. TIMELINESS OF PROPOSAL</b>	
Separate, dedicated database to track periodic review of: 1) date proposal due, 2) date received, and 3) follow up action if late	X (3)
<b>II. DATA QUALITY OF THE PROPOSAL</b>	
<b>A. Preliminary Steps</b>	
1. Review permanent file.	
a. Compare current proposal with prior negotiations and identify any unusual items or items not discussed in the proposal.	
b. Determine if grantee made changes suggested in prior review in the current proposal.	
c. Determine if prior negotiated rate had conditions; and if so, whether the organization complied with them.	
2. Determine type of rate(s) to be negotiated.	
3. Talk with grantee to determine how current information is; and if not current, discuss changes.	
4. Check the mathematical accuracy of the awardee's computations.	
<b>B. Completeness of Proposal</b>	
1. Separate columns for direct activities and for indirect costs	
2. Obtain audited Financial Statements.	
<b>C. Special Rates</b>	
Review and negotiate off-site rate(s), if applicable.	X (1)
<b>D. Reconciliation</b>	
1. Reconcile total costs, both allowable and unallowable, to total costs on the financial statements.	
2. Analyze adjustments for unallowable costs and those that should be included in the base(s).	
3. Analyze and verify the accuracy of adjustments and reclassifications.	
<b>E. Acceptable Base</b>	
1. Determine if the base proposed will equitably distribute indirect costs.	
2. Determine if the data in the bases (e.g., square footage, salaries) are current and accurate.	
<b>F. Allowability, Consistency, and Treatment of Costs</b>	
1. Determine if proposed costs benefit Federal awards.	X (1)
2. If there are multiple pools, determine if the claimed expenses benefit all activities included in the associated base.	
3. Determine if the kinds of costs in the pools are consistently treated as indirect costs.	
4. Determine if pass-through funds have been excluded from the base.	
5. Determine if personal service costs eliminated from the pool have been added to the base.	
<b>G. Level of Review</b>	
Determine and document in the file whether the proposal requires Extensive review or site visit.	
<b>H. Negotiation</b>	
Determine if there are any significant awards pending or changes contemplated in the accounting system that would affect the establishment of a provisional rate.	
<b>I. Update the permanent file</b>	

Source: HHS, *Review Guide for Non-Profit Organization's Indirect Cost Rate*; DOL, *Cost Negotiator's Handbook*, NSF, SOG 1990-06.

**APPENDIX B (CONTINUED)**

	<b>Associated with Common Finding</b>
<b>II. THE PROPOSAL IN CONTEXT: CONTENTS OF HISTORICAL FILE</b>	
<b>A. Historical Context</b>	
1. Previous signed rate agreements	
2. Previous indirect cost calculations showing pools and bases in detail	
3. Prior documentation of agreed-upon methodology regarding the treatment of Costs	
4. Last three years of documents in their entirety	
5. Last two years of A-133s (if applicable)	
6. List of Federal Funds and Percent NSF	
7. The last date of thorough proposal review and its results	
8. Trend Analysis: Compare indirect costs, bases, and rates for last three years	
<b>B. Awardee's Ability to Track Direct and Indirect Costs as Incurred</b>	
1. Description of current financial system	<b>X (3)</b>
2. Documented understanding of awardee's ledger/journal system, including general, project cost, cash receipts, and cash disbursements ledgers, payroll journal; and any other ledgers or journals	
3. Documentation of awardee's processes for identifying and segregating unallowable expenses	<b>X (5)</b>
4. Documentation of whether accounting system accounts for award costs according to categories in approved NSF budgets	<b>X (3)</b>
5. Documentation of awardee's time distribution system for allocation of salary and wages to: a) Federal awards and b) direct and indirect cost categories	<b>X (6)</b>
6. Sample time sheets showing allocation of salary and wages to: a) Federal Awards, and b) direct and indirect cost categories	<b>X (6)</b>
7. Copy or description of awardee's policies and procedures for tracking, documenting, and certifying direct and indirect time	<b>X (6)</b>
8. Organization chart (update file before each review)	
9. Chart of accounts	<b>X (8)</b>
10. Copy or description of awardee's policies and procedures for project Accounting	<b>X (1)</b>
11. Copy or description of awardee's policies and procedures for fringe benefits, travel, and purchasing	<b>X (5)</b>
<b>C. Awardee's Ability to Report Proposed Indirect Cost Rate in Compliance with Federal and NSF Requirements</b>	
1. Copy or description of awardee's policies and procedures for the preparation of the indirect cost proposal	<b>X (22)</b>
2. Documentation of awardee's experience in preparing indirect cost proposals	<b>X (13)</b>
3. Copy or description of awardee's policies and procedures for property management (e.g., exclusion of Government-funded assets from indirect cost pool)	<b>X (3)</b>
4. Copy or description of awardee's policies and procedures for vacation, sick leave, etc.	<b>X (1)</b>
5. Copy or description of awardee's policies and procedures for valuation of volunteer services	<b>X (2)</b>
<b>D. Awardee's Ability to Document Costs</b>	
Documentation of awardee's capability to support accounting entries with appropriate documentations (e.g., purchase orders, pre-approved travel orders, vouchers, etc.)	<b>X (4)</b>



## APPENDIX C

### COMPARISON OF NSF PROPOSAL REVIEW PRACTICES TO POSSIBLE REVIEW STEPS (41 Proposals Reviewed)

POSSIBLE REVIEW STEPS	Evidence Step Was Performed	No Evidence Step Was Performed	Unable to Determine If Step Was Performed	Step Not Applicable
<b>A. Preliminary Steps</b>				
1. Compare current proposal with prior negotiations and identify any unusual items or items not discussed in the proposal.	32	9	0	0
2. Determine if grantee made changes suggested in prior review in current proposal.	10	0	4	27
3. Determine if prior negotiated rate had conditions; and if so, whether the organization complied with them.	9	0	6	26
4. Determine type of rate(s) to be negotiated.	36	0	2	3
5. Talk with grantee to determine how current information is; and if not current, discuss changes.	20	19	2	0
6. Check the mathematical accuracy of the awardee's computations.	10	29	2	0
<b>B. Completeness of Proposal</b>				
1. Separate columns for direct activities and for indirect Costs	35	6	0	0
2. Obtain audited Financial Statements.	41	0	0	0
<b>C. Special Rates</b>				
Review and negotiate off-site rate(s), if applicable.	6	1	0	34
<b>D. Reconciliation</b>				
1. Reconcile total costs, both allowable and unallowable, to total costs on the financial statements.	33	5	3	0
2. Analyze adjustments for unallowable costs and those that should be included in the base(s).	33	5	3	0
3. Analyze and verify the accuracy of adjustments and reclassifications.	28	10	3	0
<b>E. Acceptable Base</b>				
1 Determine if the base proposed will equitably distribute indirect costs.	26	8	7	0
2. Determine if the data in the bases (e.g., square footage, salaries) are current and accurate.	7	29	5	0

**APPENDIX C (CONTINUED)**

<b>POSSIBLE REVIEW STEPS</b>	<b>Evidence Step Was Performed</b>	<b>No Evidence Step Was Performed</b>	<b>Unable to Determine If Step Was Performed</b>	<b>Step Not Applicable</b>
<b>F. Allowability, Consistency, and Treatment of Costs</b>				
1. Determine if proposed costs benefit Federal awards.	8	25	8	0
2. If there are multiple pools, determine if the claimed expense benefits all activities included in the associated base.	1	14	9	17
3. Determine if the kinds of costs in the pools are consistently treated as indirect costs.	6	20	14	1
4. Determine if pass-through funds have been excluded from the base.	6	2	31	2
5. Determine if personal service costs eliminated from the pool have been added to the base.	12	0	29	0
<b>G. Level of Review</b>				
Determine and document in the file whether the proposal requires extensive review or site visit.	34	7	0	0
<b>H. Negotiation</b>				
Determine if there are any significant awards pending or changes contemplated in the accounting system that would affect the establishment of a provisional rate.	2	20	5	14

**APPENDIX D**

**COMMON FINDINGS IN AUDIT REPORTS**

<b>Institution</b>	<b>Unallowable Costs in I/C Pool</b>	<b>Misclassification Of Direct Costs As Indirect Costs</b>	<b>Erroneous Exclusion of Costs in the Direct Cost Base</b>	<b>Applicable Credits Not Offset</b>	<b>Inadequate Documentation</b>	<b>I/C not Annual</b>
<b>AMS</b>	<b>x</b>	<b>x</b>			<b>x</b>	<b>x</b>
<b>MAA</b>	<b>x</b>	<b>x</b>		<b>x</b>		
<b>BLOS</b>	<b>x</b>					
<b>AAPT</b>	<b>x</b>	<b>x</b>		<b>x</b>	<b>x</b>	<b>x</b>
<b>ANS</b>	<b>x</b>				<b>x</b>	
<b>CIW</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>		
<b>Bishop</b>	<b>x</b>		<b>x</b>			
<b>MBG</b>	<b>x</b>	<b>x</b>	<b>x</b>			<b>x</b>
<b>EBC</b>	<b>x</b>				<b>x</b>	
<b>ACS</b>			<b>x</b>		<b>x</b>	
<b>AGU</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	
<b>TOTAL</b>	<b>10</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>3</b>

## APPENDIX E

### COMMON CAUSES OF FINDINGS

Institution	Inadequate Policies and Procedures for the Preparation of Indirect Cost Proposals	Inadequate Staff Training and Experience in the Preparation of Indirect Cost Proposals	Accounting System Weaknesses	Inadequate Controls Over Time and Effort Reporting
AMS	X		X	X
MAA	X	X	X	X
BLOS		X		
AAPT	X	X		X
ANS	X	X	X	X
CIW	X	X		
BISHOP	X	X	X	
MBG	X		X	X
EBC			X	
ACS	X			X
AGU		X		
<b>TOTAL</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>6</b>

## Attachment 1

### NSF's Verbatim Response to OIG's Draft Report Received September 12, 2006

#### Comment

#### Summary Report of Eleven Indirect Cost Rate Audits

Overall – We have basically the same comments that were provided verbally to your staff at the July 10, 2006 meeting on the discussion draft report.

**2000 Series** – We note that the OIG has changed the numbering sequence from the 1000 series (external) to the 2000 series (internal). We believe this is more appropriate. However, if the report is to be directed to NSF Management (internal) then we do not know why it is necessary to repeat the findings (questioned costs) on individual audit reports that have already been resolved. As an internal audit report the primary value to NSF Management is not what occurred in an individual indirect cost rate proposal up to 8-10 years ago, but what recommendations the OIG has and what steps NSF management can take to improve the indirect cost rate review process.

**Repetition of Previous Findings** - Throughout the body of the report there are a number of instances where the OIG is noting that X number of dollars in the indirect cost pool were questioned here or the awardee failed to include X number of dollars of direct costs in the direct cost base. We believe that this leaves the final product (an internal report) jumbled and confusing to read. It also presents the lay reader with the impression that NSF indirect cost rate negotiators are not doing their job. These statements could be more properly contained in the audit work-papers than in the body of the report. In addition, since questioned (audit) versus (sustained) amounts are used in the report we believe these statements lack proper context and do not accurately reflect the true impact as to eventual disposition without including the final determination issued by Management.

**CAARB Request for OIG Indirect Cost Rate Audits** - We believe it important to note that a number of the IDC reviews noted in this report were performed at the request of CAARB personnel after conducting desk reviews in order to determine that indirect cost rate pools contained allowable costs and the direct costs bases did reflect all direct cost activities of these awardee organizations. It is also worth noting that a desk review cannot replace a formal on-site audit in the depth of review of source supporting documentation. And, hence it is not at all unusual for an audit to bring up additional concerns that might not otherwise have been detected when performing a desk review.

**Audit Period vs. Projection of Results** - The period of time covered by the OIG audit Reports was roughly 1997 through 2001 while the results (potential cost savings) are being projected for a four year period from 2000-2004. We do not believe that this is appropriate. First off the projections are being based on the audit report recommendations or questioned costs not on the actual costs sustained or not sustained

under audit resolution. Secondly, a number of the awardee organizations had fixed predetermined rates during this period, so that regardless of OIG findings the reductions in indirect cost rates recommended could not be implemented. Lastly, NSF rarely negotiates multi-year rates (like DHHS or ONR), instead negotiating indirect cost rates on a year by year basis. Therefore, the multi-year projections of the funds that could have been saved are not particularly valuable to NSF Management and may indeed prove misleading to individuals outside NSF. We would also question such projections since they were not a statistically valid sample. It is important that the sample was more often a judgmental sample since the organizations audited were frequently those entities about which CAAR Cost Analysts had expressed concerns and had therefore requested OIG audit work in order to supplement and enhance our rate approval process.

**Possible Review Steps** – We would like the report to acknowledge that a number of the recommendations suggested were already implemented (proposal tracking system & documentation required in files) by NSF prior to and independent of the issuance of this report. In addition, there are a number of possible review steps noted in the appendices that are recommended for NSF use based on documentation on IDC review guides provided by other federal agencies. As far as we know the OIG did not review the actual steps undertaken by those agencies in practice as opposed to in theory. And, hence feel that this sort of yardstick type measure may not be appropriate.

### **OIG Recommendations**

CAAR will continue to improve our program for review and negotiation of indirect costs; this includes evaluation of individual indirect rate proposals for risk on a proposal by proposal basis as we negotiate each rate agreement. We will update our SOG to reflect current practice to including guidance for reviewers. As the OIG is aware, OMB is in the process of issuing a guide for non-profit organizations on establishing indirect cost rates; once this guidance is published we intend to reference it as part of our review process.

Currently we assess risk for each organization with which we are working. We review the amount of federal monies spent annually, review NSF's participation, and look at the institutions as a whole. We review and analyze variances in the rate, pool and base from year to year. We intend to strengthen this aspect of our program and improve documentation of the analysis done during each review. We believe that assessing risk in this manner allows us to responsibly assess individual organizations including consideration for its nature and type. This facilitates the determination of an equitable indirect cost rate. This is, after all, a negotiation between the Government representative (NSF) and a particular organization. The risk-based analysis of each organization for which NSF is cognizant for indirect costs allows us to consider the nuances of the multiples types of organizations (e.g. museums, associations, etc.) for which NSF negotiate rates.

As noted in the audit report, we have implemented a systematic and consistent practice of maintaining our indirect cost files, and we review and update our files in accordance

with these practices. We also have a proposal tracking system that identifies all organizations for which we negotiate rates and the status and due date of submissions. We keep this spreadsheet current and it is sufficient to track the relatively small number of organizations for which NSF negotiates annual indirect cost rate agreements.

Thank you for your comments and insight into the rate negotiation process. We are pleased that we can agree on areas that need improvement and look forward to moving ahead in improving our processes.

## **Attachment 2**

### **Additional Summary of NSF Responses to Draft Report and OIG Replies**

As discussed in the report,<sup>16</sup> NSF agreed that it needed to continue to develop and implement a program to review indirect cost rate proposals. However, NSF did have some comments/misunderstandings about other aspects of the report. In this section, we have summarized those NSF responses and have replied to them.

#### **Issue 1**

##### **2000 Series**

##### **NSF/CAARB**

Since this is an internal audit report, repetition of findings and dollar amounts on individual audit reports that have already been resolved is unnecessary.

##### **OIG Response**

The summary report has two sections: 1) summary result of audit findings and causes, and 2) implications of the findings for NSF's processes for proposal review. Although CAARB is familiar with the summary results of audit, most readers will need this context to understand the importance of and reasons for our recommended improvements concerning NSF's processes for proposal reviews.

#### **Issue 2**

##### **Repetition of Previous Findings**

##### **NSF/CAARB**

The report provides dollar amounts for findings, making the essentially internal report confusing to read, and implying that NSF cost negotiators are not doing their jobs. Any dollar figures should only appear in work papers. In addition, the numbers used are audit numbers not post-resolution numbers. The findings thus do not accurately reflect the eventual disposition.

##### **OIG Response**

We eliminated many of the dollar amounts in subfindings, but kept the totals for major findings, such as the total dollar amount of overstatement of indirect cost pools because they demonstrated the significance of the findings. We reported audit findings, not post-resolution findings because audit standards are not the same as those

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<sup>16</sup> See NSF responses to the report recommendations at page 14.



used in audit resolution, and we wanted to show the findings according to audit standards. While we did not evaluate the performance of CAARB cost negotiators individually, our recommendation for NSF to develop risk-based approach to processing indirect cost proposals should assist individual cost negotiators in doing a better job in establishing indirect cost rates for awardee organizations.

### **Issue 3**

#### **CAARB Request for OIG Indirect Cost Rate Audits**

##### **NSF/CAARB**

A number of the indirect cost reviews were performed at the request of CAARB because it determined that there were problems with the submitted proposals. Further, since audits are more comprehensive than desk reviews, it is not unusual for an audit to reveal additional concerns that would not be found in a desk review.

##### **OIG Response**

OIG conducted an independent risk assessment of institutions that submit indirect cost proposals to NSF and based its decision to audit on this assessment, as well as referrals from CAARB. In addition, the OIG reviews of 41 proposals for 1995-2002 indicated that the lack of policies and procedures for proposal review, which is a CAARB core function, was a long-standing, systemic deficiency affecting all proposal reviews not just those of the audited proposals.

### **Issue 4**

#### **Audit Period vs. Projection of Results**

##### **NSF/CAARB**

1. The period of time covered by the audit was approximately 1997 through 2001, while the results (potential cost savings) are projected for a four-year time period from 2000-2004.
2. The projections were based on questioned costs not actual costs sustained during audit resolution.
3. A number of the awardee organizations had fixed or predetermined rates, so the recommended reductions could not be implemented.
4. NSF generally negotiates rates annually, thus multi-year projections of savings are not useful and misleading.
5. The reports from which projections were made were not statistically chosen from the universe of awardees for which NSF negotiated indirect cost rates.

## **OIG Response**

1. We summarized the results of the 11 audits, which covered the period 1997-2002 (See Appendix A). As part of this summary, we restated cost savings identified in five of the audit reports totaling \$5 million to the Federal Government, including \$2 million to NSF, over five years (p. 7). The summary report did not make any additional projections of cost savings from 2000-2004.
2. We summarized future cost savings identified in five audit reports or their transmittal letters, and NSF sustained the related questioned costs in three of them. The costs not sustained were stipend costs and curatorial costs. We reported at one institution that stipends were incorrectly excluded from the direct cost bases. We continue to believe that these stipend costs were defacto wages that should have been included in the bases. Regarding curatorial costs, we reported that another institution improperly included curatorial costs in the indirect cost pools. NSF has not made a final decision on either of these issues.
3. Concerning fixed or predetermined rates, our projections assume NSF will negotiate new indirect cost rates based on lower audited rates.
4. We project saving over five years when we identify systemic problems that will continue unless our recommendations are implemented.
5. The projections were only of cost savings at the individual awardees actually audited. The summary report does not attempt to project cost savings to the entire universe of approximately 90 organizations for which NSF negotiates indirect costs.

## **Issue 5**

### **Possible Review Steps**

#### **NSF/CAARB**

NSF wanted the report to acknowledge that a number of the elements of the recommendation were already implemented prior to and independent of the issuance of the report. Also, NSF questioned the use of proposal-review benchmarks from other agencies because OIG does not know whether the other agencies actually use the review steps.

## **OIG Response**

The report states that in 2004 CAARB adopted new rules for file maintenance (p. 11), and created a spreadsheet to track the receipt of proposals (p. 13).

Of the 21 benchmarks used to evaluate 41 CAARB proposal reviews, 16 or 76 percent came from the published Department of Health and Human Services, *Review Guide for Non-Profit Organization's Indirect Cost Proposals*, the guide CAARB reviewers sometimes used as a reference guide. The other benchmark steps came from NSF's *SOG 1990-06* (5 percent) and the Department of Labor's unpublished *Cost*

*Negotiator's Handbook*, which we provided to CAARB staff (19 percent). We used these steps in the historical analysis because they were: 1) logical steps to include in proposals review, and 2) listed as review steps by at least one agency that negotiates indirect cost rates for non-profits. Also, prospectively, it should be noted that the report does not prescribe the specific steps that CAARB should include in the review guide it incorporates into its policies and procedures for indirect cost proposal review.